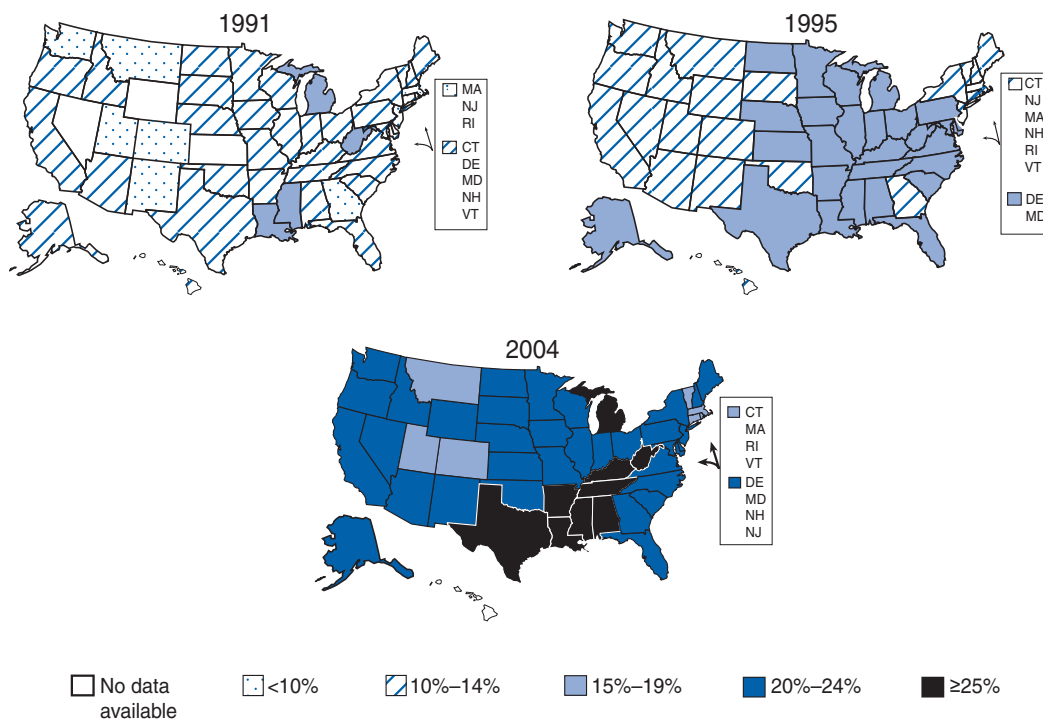


Physical Activity and Good Nutrition

Essential Elements to Prevent Chronic Diseases and Obesity

2006

Percentage of Adults Who Are Obese,* by State



* Body mass index >30 or about 30 lbs overweight for a 5' 4" person based on self-reported weight and height.
Source: CDC, Behavioral Risk Factor Surveillance System.

"As a society, we can no longer afford to make poor health choices such as being physically inactive and eating an unhealthy diet; these choices have led to a tremendous obesity epidemic. As policy makers and health professionals, we must embrace small steps toward coordinated policy and environmental changes that will help Americans live longer, better, healthier lives."

Vice Admiral Richard H. Carmona, MD, MPH, FACS
U.S. Surgeon General

The Importance of Physical Activity and Good Nutrition

Chronic diseases accounted for 5 of the leading 6 causes of death in 2002 in the United States. In addition, the prolonged illness and disability associated with many chronic diseases decrease the quality of life for millions of Americans. Much of the chronic disease burden is preventable. Physical inactivity and unhealthy eating contribute to obesity and a number of chronic diseases, including cancer, cardiovascular disease, and diabetes.

The Obesity Epidemic

Following dramatic increases in overweight and obesity among U.S. adults between 1976–1980 and 2003–2004, obesity has reached epidemic proportions—32% of adults are obese. Moreover, the epidemic is not limited to adults. The percentage of young people who are overweight has more than doubled in the last 20 years. Among children and adolescents aged 2–19 years, 17% are overweight.

People who are obese are at increased risk for heart disease, high blood pressure, diabetes, arthritis-related disabilities, and some cancers. The estimated annual cost of obesity in the United States in 2000 was about \$117 billion.

Promoting regular physical activity and healthy eating and creating an environment that supports these behaviors are essential to reducing this epidemic of obesity.

Lack of Physical Activity

Regular physical activity reduces people's risk for heart attack, colon cancer, diabetes, and high blood pressure and may reduce their risk for stroke. It also helps to control weight; contributes to healthy bones, muscles, and joints; reduces falls among older adults; helps to relieve the pain of arthritis; reduces symptoms of anxiety and depression; and is associated with fewer hospitalizations, physician visits, and medications. Physical activity can also help people avoid developing functional limitations, can improve physical function, and can provide therapeutic benefits for people with heart disease, high blood pressure, high cholesterol, osteoporosis, arthritis, lung disease, and other chronic diseases. Moreover, physical activity need not be strenuous to be beneficial; people of all ages benefit from moderate-intensity physical activity, such as 30 minutes of brisk walking most days of the week.

Despite the proven benefits of physical activity, more than 50% of U.S. adults do not get enough physical activity to provide health benefits; 24% are not active at all in their leisure time. Activity decreases with age, and sufficient activity is less common among women than men and among those with lower incomes and less education.

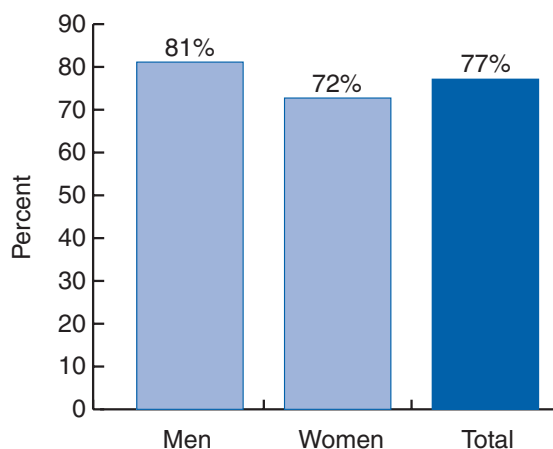
Insufficient physical activity is not limited to adults. More than a third of young people in grades 9–12 do not regularly engage in vigorous physical activity. Daily participation in high school physical education classes dropped from 42% in 1991 to 28% in 2003.

The Critical Role of Good Nutrition

Research shows that good nutrition can help to lower people's risk for many chronic diseases, including heart disease, stroke, some cancers, diabetes, and osteoporosis. However, a large gap remains between recommended dietary patterns and what Americans actually eat. For example, in 2003, only about one-fourth of U.S. adults ate the recommended five or more servings of fruits and vegetables each day. In addition, in the last 30 years, calorie intake has increased for both men and women.

Good nutrition begins in infancy. Children who were not breastfed are at increased risk of overweight, asthma, and some childhood cancers. The American Academic of Pediatrics recommends that infants be breastfed for at least 1 year, yet 30% of infants in this country are never breastfed, and 64% are no longer breastfed at 6 months of age. To help people improve their eating habits, the U.S. Department of Health and Human Services and the U.S. Department of Agriculture publish *Dietary Guidelines for Americans* every 5 years. The 2005 guidelines (available at <http://www.healthierus.gov/dietaryguidelines>) provide science-based advice to promote health and reduce risk for major chronic diseases.

Percentage of Adults Who Ate Fewer Than 5 Servings of Fruits and Vegetables Each Day, by Sex, 2005



Source: CDC, Behavioral Risk Factor Surveillance System.

CDC's National Leadership

CDC is committed to ensuring that all people, especially those at greater risk for health disparities, will achieve their optimal lifespan with the best possible quality of health in every stage of life. With new health protection goals that support healthy people in healthy places across all life stages, CDC is setting the agenda to enable people to enjoy a healthy life by delaying death and the onset of illness and disability by accelerating improvements in public health.

With fiscal year 2006 funding of \$37.5 million, CDC's Division of Nutrition and Physical Activity has worked to reduce chronic diseases and obesity through state programs, epidemiological and behavioral research, surveillance, training and education, intervention development and evaluation, health promotion and leadership, policy and environmental change, communication and social marketing, and partnership development. From these resources, the Nutrition and Physical Activity Program to Prevent Obesity and Other Chronic Diseases funded obesity prevention and control activities in 28 states. Twenty-one of these states were funded at the capacity-building level. At this funding level, states can gather data, build partnerships, create statewide health plans, and conduct pilot health interventions. The other seven states were funded at the basic implementation level. At this funding level, states can begin developing new nutrition and physical activity interventions, evaluate existing interventions, and support local efforts to prevent and control obesity and other chronic diseases. These efforts include making policy and environmental changes to encourage access to healthy foods and places to be active, and strengthening obesity prevention and control programs in preschools, child care centers, work sites, and many

other community settings. All funded states will continue to evaluate their interventions to determine their effectiveness and to guide future efforts.

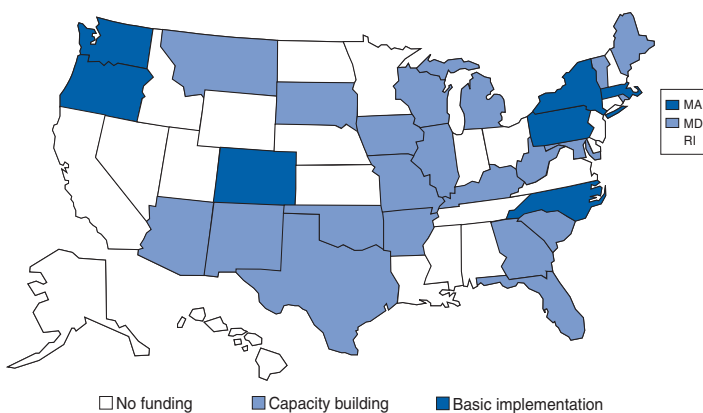
Providing Training and Technical Assistance

CDC supports the health departments of funded states by providing consultation, technical assistance, and training. For example, in early 2006, the second annual evaluation workshop, *Evaluation: The Roadmap to Success*, was held. Each year, participants at the workshops learn how to increase their state obesity prevention programs' capacity to plan, develop, and evaluate interventions.

CDC also works with the Center of Excellence for Training and Research Translation at the University of North Carolina at Chapel Hill to build a Web-accessible database of obesity interventions, best practices, implementation tools, and curricula for state and community public health practitioners and to provide states with training on ways to translate interventions for use in their settings and populations. For instance, a model will provide states with guidance on how they can translate obesity interventions and best practices into simple, feasible public health practices. The database will identify evidence-based weight loss interventions, family-centered interventions, as well as methods and standards for community-based obesity interventions.

CDC also continues its longtime partnership with the University of South Carolina as co-sponsor of the Physical Activity and Public Health Courses. These courses provide intensive training in physical activity for both public health practitioners and public health researchers.

CDC Funding for Physical Activity and Nutrition Programs to Prevent Obesity and Other Chronic Diseases, FY 2005



Improving Health Care Services

Medical settings offer ideal opportunities to promote good nutrition and physical activity. In recent years, CDC has worked with insurers, managed care organizations, and other federal agencies to improve health care services for obese patients. As a result, Kaiser Permanente® has explored new primary care approaches to addressing nutrition and physical activity behaviors related to overweight in children and adolescents. Following a request from CDC, the Centers for Medicare & Medicaid Services removed language in its regulations that stated that obesity was not an illness.

Laying the Foundation for the Future

State Program in Action

Like other funded states, North Carolina and its partners look at all levels of influence (individual, interpersonal, organizational, community, and societal) that could be addressed to support long-term healthy lifestyle choices.

- At the individual level, North Carolina's *Color Me Healthy* program teaches children aged 4 and 5 about physical activity and healthy eating with interactive activities that incorporate color, music, and exploration of the senses. Over 5,000 child care providers statewide have been trained to teach *Color Me Healthy*. The program is available in all 100 North Carolina counties and is being used in more than 30 states.
- North Carolina's Nutrition and Physical Activity Self-Assessment for Child Care (NAP-SACC) aims to improve nutrition and physical activity environments and practices in child care centers. Center staff conduct assessments and establish action plans based on their findings.
- The state's Division of Public Health's Physical Activity and Nutrition Branch partnered with the Department of Public Instruction and the North Carolina Cooperative Extension to produce *Move More: North Carolina's Recommended Standards for Physical Activity in School*. This document provides voluntary standards for physical activity and quality physical education and offers ideas for supporting these standards.

Conducting Essential Research

CDC supports research to enhance the effectiveness of physical activity and nutrition programs. For example, studies focus on the effectiveness of breastfeeding interventions in various settings; the effectiveness of parent-focused strategies to reduce the time children spend watching television; the role of fruit and vegetable consumption in managing weight; and the use of policy interventions to promote physical activity. CDC disseminates the results of these studies via publications and the Web. For example, *A Guide to Breastfeeding Interventions* helps states and others select breastfeeding promotion and support programs that have been found to be effective.

Monitoring Nutritional Status

Through its Pediatric Nutrition Surveillance System (PedNSS) and Pregnancy Nutrition Surveillance System (PNSS), CDC facilitates the collection, analysis, and interpretation of key indicators of child nutritional status and behavioral and nutritional risk factors for low-income pregnant women. An interactive CDC Web site trains individuals how to use these systems.

Providing Growth Charts and Training

Correctly identifying weight problems among young people is essential to public health efforts to prevent overweight. The 2000 CDC Growth Charts include body mass index by age charts for boys and girls aged 2–20 years. The charts and training modules on how to use them are available at <http://www.cdc.gov/growthcharts>. The training modules meet continuing education criteria for physicians and nurses.

Promoting Work Site Health

In response to the worksite component of the *Steps to a HealthierUS* initiative, CDC disseminates evidence-based interventions and lessons learned to other federal, state, and private employers through a Web-based tool kit. In 2006, policy and environmental changes will continue to be developed and implemented at CDC work sites to help people make healthy choices.

Encouraging Global Collaboration

CDC sponsored the first International Congress of Public Health and Physical Activity in 2006. By providing a unique forum for interaction among the various sectors interested in physical activity and health, this meeting advanced the sharing of information and the collaborations that are essential to community efforts to promote physical activity around the world.

Future Directions

CDC and its partners will continue to create, evaluate, and modify programs, policies, and practices to prevent and control obesity. CDC also will expand communication efforts to promote physical activity and good nutrition in work sites, schools, and health care settings. CDC will continue to support HHS's *Steps to a HealthierUS* initiative as it works with communities across the country on innovative strategies to promote physical activity and good nutrition.

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